OCD-A	RTESIA					
om 3160-3 April 2004) NITED STATES		7	:	OMB No	APPROVE b. 1004-013 March 31, 2	17
EPARTMENT OF THE BORLAU OF LAND MAN	INTERIOR			5. Lease Serial No. NM NM 1035	70	
APPLICATION FOR PERMIT TO	DRILL OR	REENTERMON	n - Year 1 2007	6. If Indian, Allotee		
a. Type of work: DRILL REENTI	ER	oco-	ARTESIA.	f Unit or CA Agre	eement, N	
o. Type of Well: Oil Well Gas Well Other	✓ Sin	ngle Zone Multip	ole Zone	8. Lease Name and 3 Lock Box 19		ederal #1
Name of Operator Parallel Petroleum Corporation	230	387		9. API Well No.	15	35586
n. Address 1004 North Big Spring, Suite 400 Midland, Texas		(include area code)	nila [10. Field and Pool, or	Explorate	
Location of Well (Report location clearly and in accordance with an At surface 1884' FNL AND 110' FWL	ny State requirem		Mile	11. Sec., T. R. M. or E		
At proposed prod. zone 1887' FNL and 660' FEL				24, T19S, R21	E	
Distance in miles and direction from nearest town or post office* 9 miles south of Hope, New Mexico				12. County or Parish Eddy		13. State NM
Distance from proposed* location to nearest property or lease line, ft. Calso to pearest drig unit line if any) 660'	16. No. of a	cres in lease	17. Spacin	g Unit dedicated to this	well	
(Also to nearest drig unit line, if any) 660' Distance from proposed location*	2,560.00	d Denth	ļ	/BIA Bond No. on file		
to nearest well, drilling, completed, applied for, on this lease, ft.				3000265		
Elevations (Show whether DF, KDB, RT, GL, etc.) GL 4215'	22. Approxi	mate date work will sta 04/01/2007	rt*	23. Estimated duration 30 days	on	
	24. Attac	chments		<u>. </u>	-	- HU-72-W-JURGE
e following, completed in accordance with the requirements of Onsho	ore Oil and Gas	Order No.1, shall be a	ttached to th	is form:		
Well plat certified by a registered surveyor. A Drilling Plan.		4. Bond to cover t Item 20 above).	he operatio	ons unless covered by an	n existing	bond on file (see
A Surface Use Plan (if the location is on National Forest System SUPO shall be filed with the appropriate Forest Service Office).	1 Lands, the	Operator certific Such other site authorized office	specific inf	ormation and/or plans a	is may be	required by the
. Signature Leve Lunan	l l	(Printed/Typed) Deane Durham			Date 3 -	-8-07
ie Engineer, Parallel Petroleum Corporation					•	
proved by (Signature)	Name	(Printed/Typed)			Date	
ACTING FIELD MANAGEA	Office	7s/ CARL	James SBAD	Stovall FIELD OF		APR 3 0 2
Market and the second of the s	lds legal or equi	itable title to those righ	hts in the sul	bject lease which would	entitle th	e applicant to
opfication approval does not warrant or certify that the applicant hol nduct operations thereon.		J				FOR 1 YEA

*(Instructions on page 2)

Roswell Controlled Water Basin

SEE ATTACHED FOR CONDITIONS OF APPROVAL

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED If earthen pits are used in association with the drilling of this well, an OCD pit permit must be obtained prior to pit construction.

DISTRICT 1625 N. French Dr., Hobbs, NM 88240

1301 W. Grand Avenue, Artesia, NM 88210

DISTRICT III 1000 Rio Brazos Rd., Aztec, NM 87410

State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION 1220 South St. Frances Dr.

Santa Fe, NM 87505

Form C-102 Revised October 12, 2005 Submit to Appropriate District Office State Lease - 4 Copies Fee Lease - 3 Copies

☐ AMENDED REPORT

DISTRICT IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

		1	WELL LOCA	OITA	AND ACREA	GE DEDICATION	N PLAT		
API	Number			Pool Co	de E	5 1 5	Pool Name	. 0 .	
D.,		T	97553		Property Naz	Mile Draw	WOLFCAM	4/ 5U	
Property	Code			3 10	Property Nai CK BOX 1921			/ Well Nur	ner
OGRID N	0.	-			Operator Nan			Elevation	n
			PA	RALLE	L PETROLEUM		l	421	
		·			Surface Loc	ation		A. community	
UL or lot No.	Section	Township	p Range	Lot Id	n Feet from the	North/South line	Feet from the	East/West line	County
E	24	19 S	21 E		1884	NORTH	110	WEST	EDDY
			Bottom	Hole	Location If Diff	erent From Sur	face	·	
UL or lot No.	Section	Township		Lot Id		North/South line	Feet from the	East/West line	County
Н	24	19 S	21 E		1887	NORTH	660	EAST	EDDY
Dedicated Acres	Joint or	r Infill	Consolidation (Code	Order No.	1		1	L
320									
NO ALLOWA	BLE WILL	BE AS	SIGNED TO	THIS	COMPLETION UN	TIL ALL INTERES	TS HAVE BEEN	CONSOLIDATE	D OR
					NIT HAS BEEN A				
NOTE:							i i	OR CERTIFICA	
Mercator Gr	rid and Con	form to ti	are Transverse he "New Mexico				the best of my knowledge	information contained herein is to and belief, and that this organiz	ation either own
			ast Zone, North shown hereon are				, ,	sed mineral interestin the land in s a right to drill this well at this	
mean horizo								er of such a mineral or workin nl or a compulsory pooling order i	
					Project		the division.		
					√ Area			Ω	
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						7 1 1	Signature	Date	
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	i		(SL)	660	4-1	-48,660	_3		
		,	4228.2	754	2		SURVEY	OR CERTIFICA	TION
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	ļ				[ober 262006	14,
							Date of Surv	idh.	D'INV
					-		Signature &	Seal of Profession	Servey
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			Coording Description	ate Tab	le Plane Coordinate		1///	(12135)	
			x 1921-24 Fede	eral #1			\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		
		3 Lock Bo	ox 1921–24 Fed ion Point	eral #1			W.O. 1	Vum. 2006-10	16/8/
		3 Lock Bo	x 1921-24 Fed	eral #1	X = 374,610.2			THE COLUMN	T 134 324
	11	BOLLOW H	<u>ole Location</u>		Y = 599,668.5		Certificate N	IO. MÁCON, MCDONN	が 1218

ATTACHMENT TO FORM 3160-3 3 LOCK BOX 1921-24 FEDERAL #1 Surface Hole Location 1884 FNL AND 110 FWL, SEC 24, 19S, 21E Bottom Hole Location 1887 FNL AND 660 FEL, SEC 24, 19S, 21E EDDY COUNTY, NEW MEXICO

DRILLING PROGRAM

This well is designed as a horizontal test in the Wolfcamp formation.

1. GEOLOGIC NAME OF SURFACE FORMATION

San Andres

2. ESTIMATED TOPS OF IMPORTANT GEOLOGIC MARKERS

Glorieta 1739'(+2476')
Tubb 2745'(+1470')
Yeso 2885' (+1330')
Abo Shale 3385' (+830')
Abo Carbonate 3499' (+716')
Wolfcamp 4330' (-115')
Wolfcamp Shale 4430'(-215')

3. ESTIMATED DEPTHS OF ANTICIPATED FRESH WATER, OIL, OR GAS

Fresh water

790'

Oil and Gas

Wolfcamp 4330' (-115')

No H₂S gas should be encountered

4. CASING AND CEMENTING PROGRAM

<u>From To</u>	<u>Weight</u>	<u>Grade</u>	<u>Joint</u>
0'-120'			
0'-1500'	24#	J-55	STC
0' – TOTAL DEPTH	17#	N-80	LTC
	0'-120' 0' - 1500'	0'-120' 0' - 1500' 24#	0'-120' 0' - 1500' 24# J-55

Equivalent or adequate grades and weights of casing may be substituted at time casing is run, depending on availability.

3 LOCK BOX 1921-24 FEDERAL #1 Page 2

8-5/8" slurry: Lead: 225 sacks (50:50) Poz (Fly Ash): Class C + 5% bwow Sodium Chloride + 10% bwoc Bentonite + 151.7% fresh water. Tail: 235 sacks Class C + 1% bwoc Calcium Chloride + 56.3% fresh water

Note: If cement does not circulate to surface, notify BLM. A temperature survey will be required. Top out to surface with 1" pipe in the annulus.

Note: 5-1/2" Acid-soluble cement per completion procedure.

Drilling Procedure

- a. Set 16" conductor pipe as deep as possible up to 120' with a rathole unit.
- b. Drill 11" surface hole to an approximate depth of 1500', using fresh water and viscous sweeps for hole cleaning. Set 8 5/8", 24# J-55 casing with 460 sx, Class C cement (lead will be 50/50 Poz, circulate to surface, 1" if necessary).
- c. Set slips on 8 5/8" CSG. Cut 8 5/8" CSG and NU & test BOP.
- d. Drill 7 7/8" production hole to approximately 4,600', using cut brine to an approximate depth of 3,300' and a polymer mud system to TD.
- e. Run open-hole logs
- f. Set CMT kick-off plug.
- g. Dress CMT to kick off point at approximately 3,756'.
- h. Build angle at 10 degrees per 100' to 90 degrees and hold.
- i. Drill 7 7/8" horizontal drain hole to a terminus of 660' FEL approximately 8,584'.
- i. Run 5 ½" 17# N-80 CSG to TD. Cement with 750 sx Class C Acid Soluble
- k. Circulate to surface or run temperature survey to verify tie in to surface casing.
- 1. Rig Down Rotary Tools

SEE COA

3 LOCK BOX 1921-24 FEDERAL #1 Page 3

5. MINIMUM SPECIFICATIONS FOR PRESSURE CONTROL

The BOP stack will consist of a 3,000 psi working pressure, dual ram type preventer and annular.

A BOP sketch is attached.

6. TYPES AND CHARACTERS OF THE PROPOSED MUD SYSTEM

- a. Spud and drill to 1,500' with 8.3 ppg Fresh Water system and viscous sweeps for hole cleaning.
- c. The production section from 1,500' to 3,300' will utilize a cut brine mud system from 8.8 to 9.2 ppg.
- d. The remaining production section from 3,300' to TD will be a polymer mud system with mud weight (8.8 9.6) sufficient to control formation pressure anticipated to be approximately 1,900 psi.

7. AUXILIARY WELL CONTROL AND MONITORING EQUIPMENT

None required.

8. LOGGING, TESTING, AND CORING PROGRAM

Mud logs as well as CNL/LDT/CAL/GR logging is planned. Additional openhole logs, drill stem tests, cores and sidewall cores are possible.

9. <u>ABNORMAL CONDITIONS, PRESSURES, TEMPERATURES & POTENTIAL HAZARDS</u>

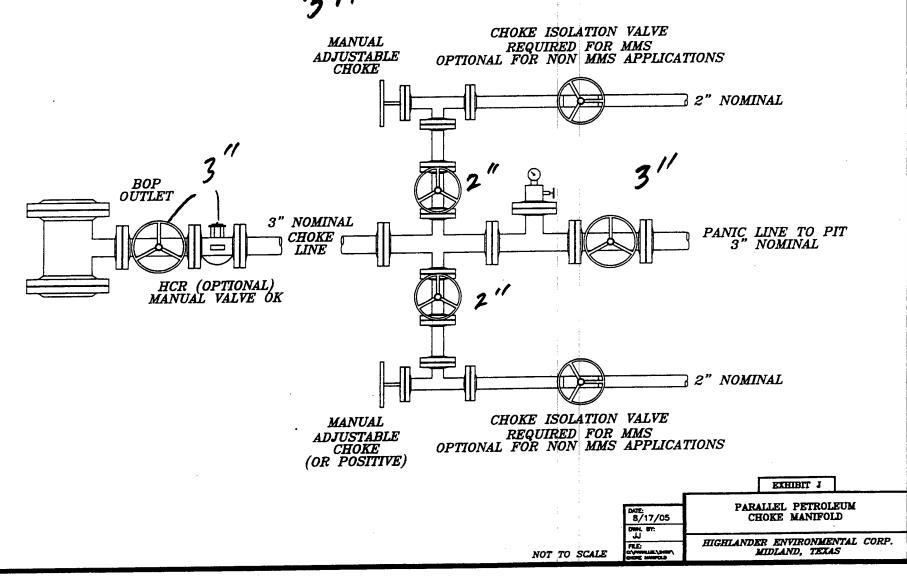
None anticipated.

BHP expected to be 1,900 psi.

10. ANTICIPATED STARTING DATE:

It is planned that operations will commence around forth quarter of 2007 with drilling and completion operation lasting about 35 days.

CHOKE MANIFOLD 5M SERVICE 3 M



11	P	AR	AL	LEI		IRVEY C	ALCULA	TION	N PROGR	RAM .
	PET	ROLE	UM CORP	ORATIO	N					
OPERATOR: Parallel Petroleum C				Corporation	on	Supervisor				
WELL			3 Lock Bo	x 1921-24	Federal #	¥1				
	TION:		N/2 Sec. 2	4 T-19-S F	₹-21-E					
API N	UMBER		<u> </u>							
			COMM	ENTS:						
	•								EC.(-/+)	
									ORR.(-/+)	
								IOTAL	CORR.(-/+)	0.0
		DATE:	02/12/07		TIME:	3:34 PM	TRUE TO GRID)		~
MINIML	M CURV	ATURE C	ALCULATION	IS(SPE•3362) P	ROPOSEDI	DIRECTION	90.0	TARGET T	
SVY			GRID		VERT			DLS/	ABOVE(+)	RIGHT(+)
NUM	MD	INC	AZM	TVD	SECT	N-S	E-W	100	BELOW(-)	LEFT(-)
TIE	0	0.0	0.0	0.0	0.0	0.0	0.0			
1	3756	0.0	0.0	3756.0	0.0	0.0	0.0	0.0	574.0	0.0
2	3766	1.0	90.0	3766.0	0.1	0.0	0.1	10.0	564.0	0.0
3	3776	2.0	90.0	3776.0	0.3	0.0	0.3	10.0	554.0	0.0
4	4658	90.0	90.0	4330.2	574.3	0.0	574.3	10.0	-0.2	0.0
5	8584	90.0	90.0	4330.2	4500.3	0.0	4500.3	0.0	-0.2	0.0

KOP @ 3756' MD BUR = 10 DEG per 100 FT End Curve @ 4658' MD, 4330.2' TVD BHL @ 8584' MD, 4330.2' TVD, 4500.3' VS

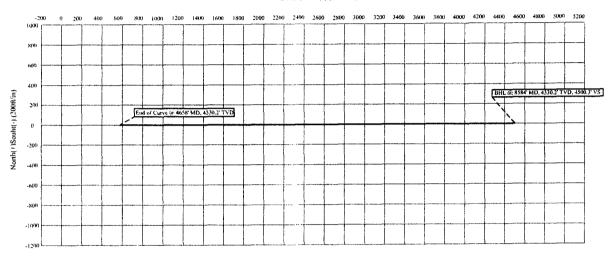
Parallel Petroleum Corp.

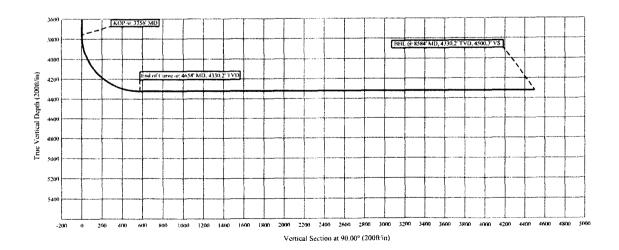
COMPANY DETAILS

Parallel Petroleum Corp. 1004 N. Big Spring, Ste 400 Midland, Texas 79701

3 Lock Box 1921-24 Federal #1 N/2 Sec. 24, T-19-S, R-21-E Eddy County, New Mexico

East(+)/West(-) (200ft/in)





3 LOCK BOX 1921-24 FEDERAL #1

Page 2

EXHIBITS:

- A. Area Road Map
- B. Drilling Rig Layout
- C. Pad Elevation Plat
- D. Vicinity Map
- E. Area Production Map
- F. Topographic & Location Verification Map
- G. Well Location & Acreage Dedication Map (NMOCD Form C-102)
- H. NMOCD Form C-144, Pit Registration (Original forwarded to NMOCD)
- I. Blow Out Preventer (BOP) Schematic
- J. Choke Manifold Schematic
- K. Estimated Horizontal Survey Calculation Program
- L. Estimated Wellbore Plot

1. EXISTING ROADS

- A. Exhibits A and D are area road maps showing existing roads in the vicinity of the site.
- B. Exhibit F is a topographic map of the location showing existing roads and the proposed new access road.

2. ACCESS ROADS

A. Length and Width

The access road will be built as shown on Exhibit D. The new access road will come off an existing access road to the Jack in the Box Federal #1. From this point the road will go east 4428' to the Parallel Petroleum, Box Cars 1921-13 Federal #1 location and continue south 2052' to the well site. The new access road will be 16' to 24' wide.

B. Surface Material

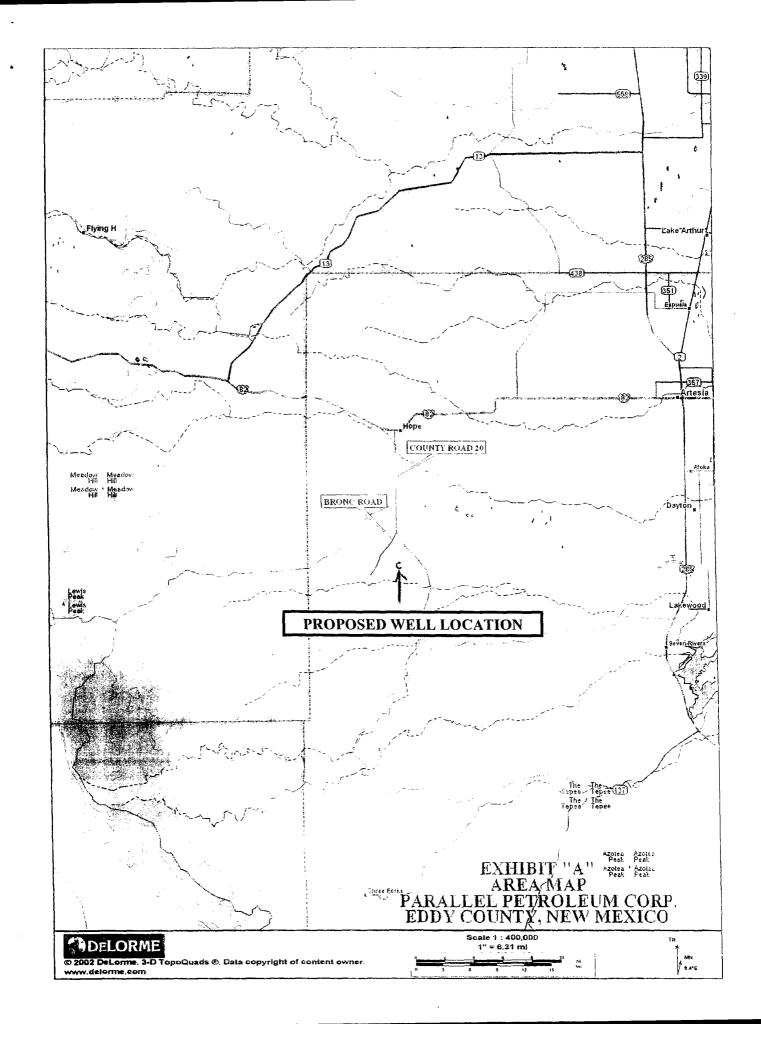
Caliche from a commercial source.

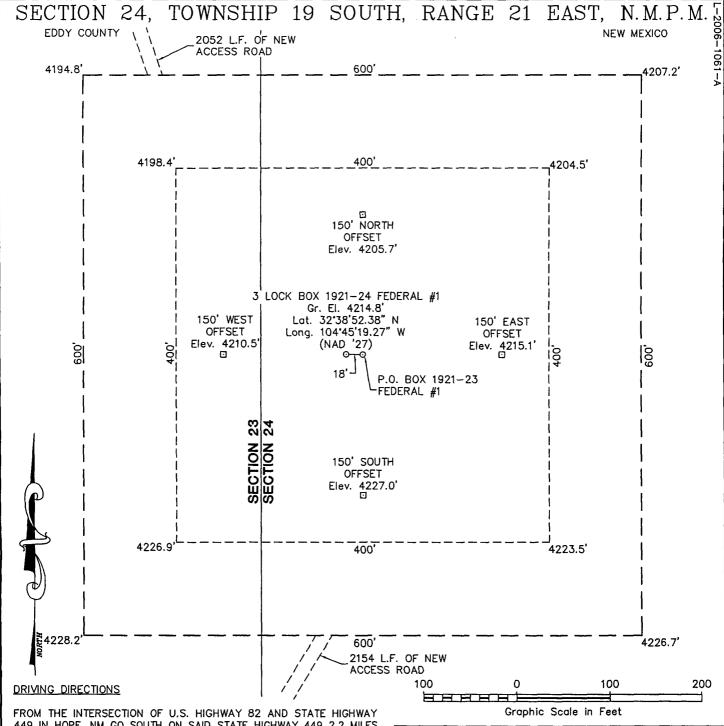
C. Maximum Grade

Less than five percent.

D. <u>Turnouts</u>

No turnouts are planned on the access road.





FROM THE INTERSECTION OF U.S. HIGHWAY 82 AND STATE HIGHWAY 449 IN HOPE, NM GO SOUTH ON SAID STATE HIGHWAY 449 2.2 MILES TO THE END OF SAID STATE HIGHWAY 449 AND THE BEGINNING OF COUNTY ROAD 12, THEN CONTINUE SOUTH ANOTHER 4.8 MILES (6.9 TOTAL) TO A FORK IN THE ROAD, THE INTERSECTION OF SAID COUNTY ROAD 12 AND A LEASE ROAD HEADING SOUTHWEST (RIGHT FORK), THEN GO SOUTHWEST ALONG SAID LEASE ROAD 4.2 MILES TO AN ACCESS ROAD ON EAST (LEFT) SIDE OF ROAD, THEN GO EAST ALONG SAID ACCESS ROAD 0.7 MILE TO A NEW ACCESS ROAD ON THE EAST (LEFT) SIDE OF ROAD, THEM GO EAST AND SOUTH 0.8 MILE TO THE WELL PAD FOR THE BOX CARS 1921–13 FEDERAL #1 WELL THEN FROM THE SOUTH LINE OF SAID WELL PAD, GO SOUTH ALONG ANOTHER ACCESS ROAD 0.4 MILE TO THE PROPOSED LOCATION.



110 W. LOUISIANA, STE. 110 MIDLAND TEXAS, 79701 (432) 687-0865 - (432) 687-0868 FAX

PARALLEL PETROLEUM CORPORATION

3 LOCK BOX 1921-24 FEDERAL #1

Located 1884' FNL & 110' FWL, Section 24
Township 19 South, Range 21 East, N.M.P.M.
Eddy County, New Mexico

Drawn By: LVA	Date: November 20, 2006
Scale: 1"=100'	Field Book: 348 / 32-38
Revision Date:	Quadrangle: Holt Tank
W.O. No: 2006-1061	Dwg. No.: L-2006-1061-A

CONDITIONS OF APPROVAL - DRILLING

Operator's Name:

Parallel Petroleum Corp.

Well Name & No.

3 Lock Box 1921-24 Federal # 1

Location: BHL:

1884'FNL, 110'FWL, SEC24, T19S, R21E, Eddy County, NM 1887'FNL, 660'FEL, SEC24, T19S, R21E, Eddy County, NM

Lease:

NM-103570

I. DRILLING OPERATIONS REQUIREMENTS:

A. The Bureau of Land Management (BLM) is to be notified a minimum of 4 hours in advance, at the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 361-2822 - for wells in Eddy County, in sufficient time for a representative to witness:

1. Spudding

8,625,0002

- 2. Cementing casing: 16 inch 9.625 inch 5.5 inch
- 3. BOP tests
- B. A Hydrogen Sulfide (H2S) Drilling Plan is N/A.
- C. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
- D. Gamma-Ray/Neutron logs shall be run from the base of the Salado Formation to the surface; cable speed not to exceed 30 feet per minute.
- E. If floor controls are required, (3M or Greater) controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

II. CASING:

- A. The 8.625 inch surface casing shall be set at 1500 feet and cement circulated to the surface.
 - 1. If cement does not circulate to the surface the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.
 - 2. Wait on Cement (WOC) time for a primary cement job will be a minimum of 12 hours for a non-water basin, 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compression strength, which ever is greater. (This is to include the lead cement)
 - 3. WOC time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds of compression strength, which ever is greater.
 - 4. If cement falls back, Remedial cementing shall be completed prior to drilling out that string.
- B. The minimum required fill of cement behind the _5.5_ inch production casing is cement shall extend upward a minimum of 200 feet above the base of the intermediate casing string.
- C. Whenever a casing string is cemented in the R-111-P Potash Area, the NMOCD requirements shall be followed.
- D. If hard band drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

III. PRESSURE CONTROL:

- A. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2.
- B. Minimum working pressure of the blowout preventer and related equipment (BOPE) required for drilling below the <u>8.6525</u> inch casing shall be <u>2000</u> psi.

8.625 point.

C. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

- 1. The tests shall be done by an independent service company.
- 2. The results of the test shall be reported to the appropriate BLM office.
- 3. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of the independent service company test will be submitted to the appropriate BLM office.
- 4. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi in accordance with API RP 53. The test will be held for a minimum of 10 minutes if the test is done with a test plug and 30 minutes without a test plug.
- 5. A variance to test the _____ to the reduced pressure of ___psi with the rig pumps is approved the BOP/BOPE must be tested by an independent service company.

IV. Hazards:

- 1. Our geologist has indicated that there is potential for lost circulation in the San Andres, Glorieta and Wolfcamp formations.
- 2. Our geologist has indicated that there is potential for high pressure in the Wolfcamp formation.

Engineering may be contacted at 505-706-2779 for variances if necessary.

FWright 3/23/07

District I 1625 N. French Dr., Hobbs, NM 88240 District II 1301 W. Grand Avenue, Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 For drilling and production facilities, submit to appropriate NMOCD District Office.
For downstream facilities, submit to Santa Feoffice.

Form C-144 June 1, 2004

Pit or Below-Grade Tank Registration or Closure

Is pit or below-grade tank covered by a "general plan"? Yes No vpe of action: Registration of a pit or below-grade tank Closure of a pit or below-grade tank

Type of action: Registration of a pit	or below-grade tank 🛛 Closure of a pit or below-gra	ade tank						
Operator: Parallel Petroleum Corporation Telephone: Address: 1004 N. Big Spring Street, Suite 400, Midland, Texas 79	~	miller@hec-enviro.com						
		C 24 T 10C D 21E						
		Sec 24 T 19S R 21E						
	2° 38' 52.38" N Longitude 104° 45' 19	9.27" W NAD: 1927 X 1983 [
Surface Owner: Federal State Private Indian								
<u>Pit</u>	Below-grade tank							
Type: Drilling Production Disposal	Volume:bbl Type of fluid:							
Workover								
Lined ☐ Unlined ☐ Double-walled, with leak detection? Yes ☐ If not, explain why not.								
Liner type: Synthetic M Thickness 12 mil Clay								
Pit Volume 25,000 bbl								
	Less than 50 feet	(20 points)						
Depth to ground water (vertical distance from bottom of pit to seasonal	50 feet or more, but less than 100 feet	(10 points) 0						
high water elevation of ground water.) 750'	100 feet or more	(0 points)						
	Yes	(20 points)						
Wellhead protection area: (Less than 200 feet from a private domestic	No	(0 points) 0						
water source, or less than 1000 feet from all other water sources.)	110	(o points)						
Distance to surface water: (horizontal distance to all wetlands, playas,	Less than 200 feet	(20 points)						
irrigation canals, ditches, and perennial and ephemeral watercourses.)	200 feet or more, but less than 1000 feet	(10 points) 0						
inigation callais, altonos, and percinial and opinional watercoalses.)	1000 feet or more	(0 points)						
	Ranking Score (Total Points)	0						
If this is a pit closure: (1) Attach a diagram of the facility showing the pit your are burying in place) onsite offsite If offsite, name of facility_remediation start date and end date. (4) Groundwater encountered: No (5) Attach soil sample results and a diagram of sample locations and excavations.	Yes If yes, show depth below ground surface	description of remedial action taken including						
Additional Comments:								
I hereby certify that the information above is true and complete to the best has been/will be constructed or closed according to NMOCD guidelin Date: 3.3-07								
	0.000							
Printed Name/Title Gary Miller, Agent Phone 432/682/4559 Your certification and NMOCD approval of this application/closure does otherwise endanger public health or the environment. Nor does it relieve regulations.	not relieve the operator of liability should the conten							
Approval:	-							
Printed Name/Title	Signature	Date:						